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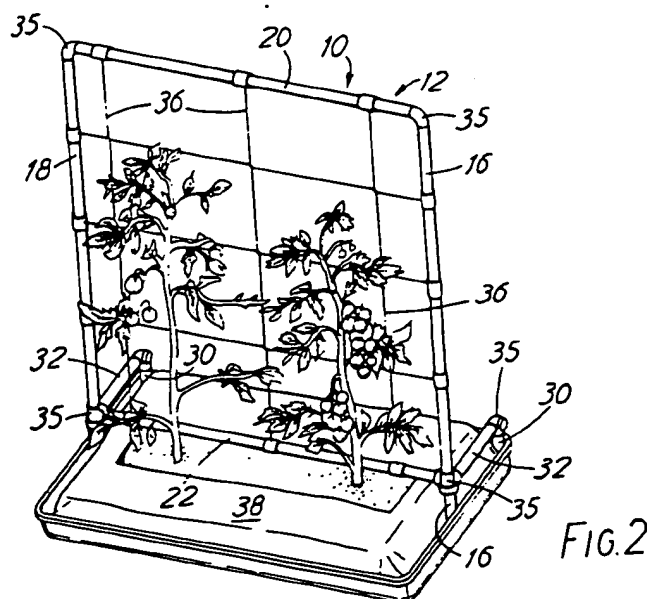
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(58) Field of search
UK CL (Edition K) **A1E EAD**
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(54) Supporting plants in grow bags

(57) A support frame (10) for plants to be grown from a grow bag (38), comprises base means (14), upright framing means (12), and a pair of spaced apart members (16) extending downwardly to interconnect the framing means (12) and the base means (14) such as to provide a void between the said spaced apart members (16) and between the base means (14) and the (remainder of the) framing means (12) and such that a grow bag (38) can be located in the said void below the upright framing means (12) and be supported by the base means (14).



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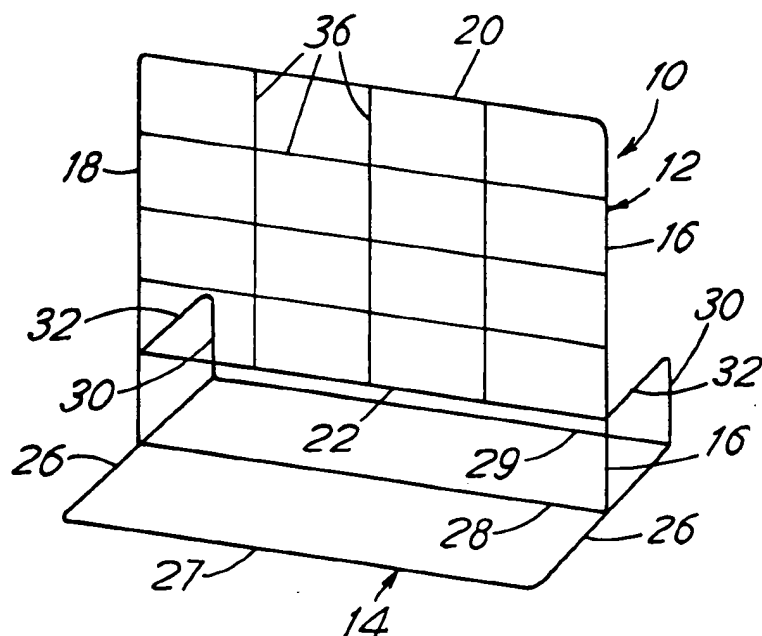


FIG. 1

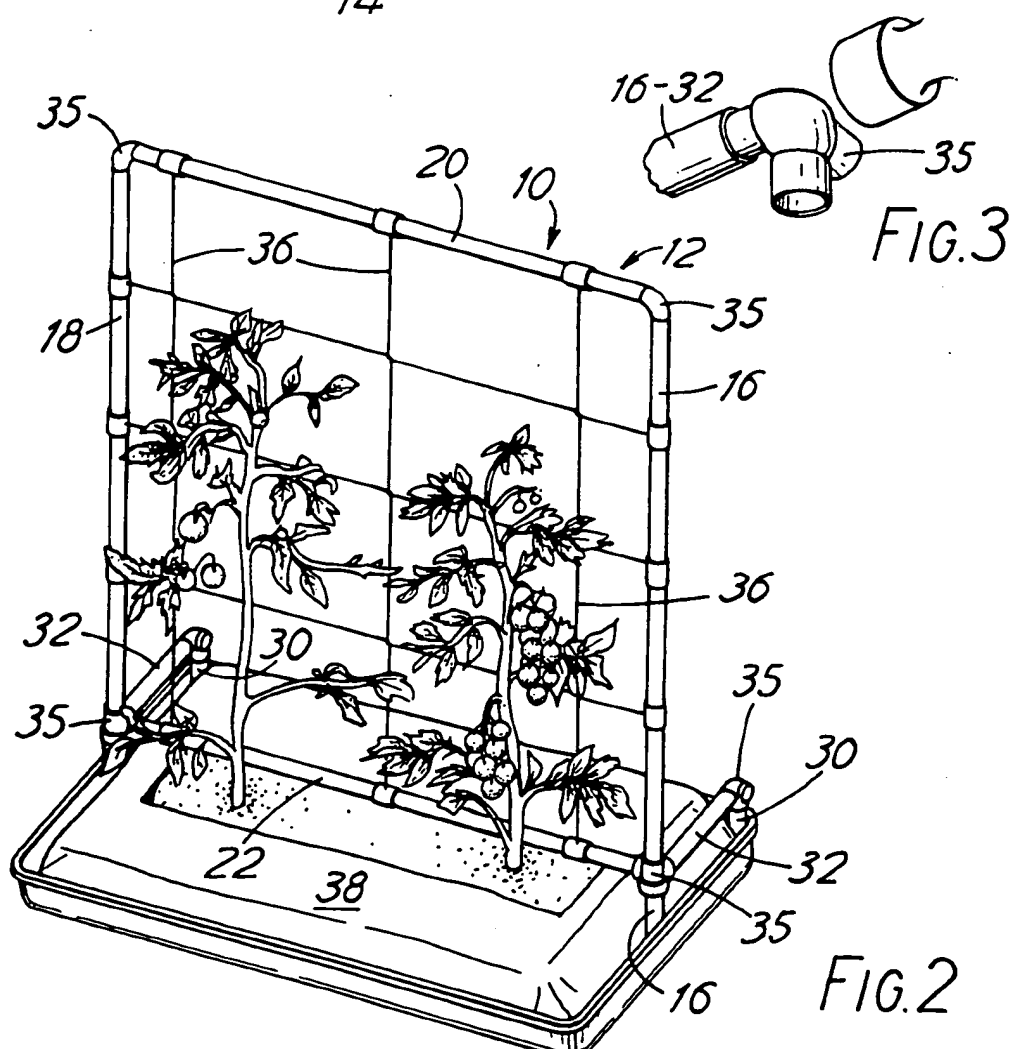


FIG. 3

FIG. 2

GROWING PLANTS

This invention relates to the growing of plants.

5 It has recently become a widespread practice to use so-called "grow bags" for the growing of plants. These grow bags are flexible containers of sack-like form filled with a prepared growing medium, e.g. soil having mixed in therewith an appropriate mixture of nutrients and, occasionally,
10 herbicides and/or fungicides too. In use the grow bag is lain on one side and the opposite side is cut open longitudinally so that the plants planted in the growing medium can grow upwardly through the longitudinal opening thus formed.

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A difficulty arises where the growing plants require support whilst they grow, since any stakes pushed into the bag's growing medium will be held with insufficient rigidity. Where the grow bag is lain on top of ground earth, added
20 rigidity might be obtained by pusshing the stakes through the said one side of the grow bag and into the ground earth. However this allows an egress of the growing medium (and especially its nutrients) from the bag and also permits an ingress of unwanted bodies such as insects and the like.
25 Although it may be possible to push stakes into the ground earth adjacent the ends of the grow bag and provide a wire or net support frame between the stakes, such frames require considerable effort and/or skill to erect (and cannot be done properly with a minimum of energy or labour), are
30 likely to be unsightly, and are also generally weak and incapable of withstanding substantial winds. Furthermore, it is not possible to provide such a staked support frame where the grow bag is on a solid base, e.g. the floor of a greenhouse, conservatory or patio.

35

With a view to overcoming these and/or other difficulties one aspect of the present invention provides a support frame for plants to be grown from a grow bag, the support frame comprising upright framing means including a pair of spaced
5 apart upright members, base framing means including one or more first members to support the lower end portions of said upright members and one or more second members extending in planes parallel to or transverse to the vertical plane of said upright members (i.e. not coplanar therewith) to
10 support a grow bag below the upright framing means.

According to another aspect of this invention there is provided a method of supporting plants growing from a grow bag, said method being characterised by laying the grow bag
15 on a base portion of a support frame such that the grow bag is supported by said base portion, and upright portions of the frame rise upwardly above it.

In use, the weight of the grow bag holds the frame in
20 position and enables it to withstand wind forces.

Preferably the frame is composed of a plurality of interconnecting parts. This permits sale of the frame in knock-down form and subsequent ready assembly by the user.

25 By way of non-limiting example, one embodiment of the present invention will now be described with reference to the accompanying drawings of which:

30 Figure 1 is an exaggerated perspective view of an erected support frame according to this invention before a grow bag is lain thereon,

Figure 2 is a schematic perspective view of a similar support frame according to this invention when in use and supporting a grow bag and the plants
35 growing therefrom, and

Figure 3 is a perspective view of a jointing member.

The illustrated frame 10 comprises a main upright frame 12 upstanding from a base frame 14. The main upright frame 12 is of generally rectangular outline and comprises a pair of spaced apart upright members 16,18 interconnected across the top by an upper cross member 20 and interconnected adjacent the bottom by a lower cross member 22. The base frame 14 is also of generally rectangular outline and comprises a pair of spaced apart side members 26 and three longitudinal members 27,28 and 29 extending between and interconnecting the two side members 26, the central member 28 extending generally in the vertical plane of the upright frame 12. Each side member 26 is connected intermediate its ends to the bottom of the associated upright member 16,18 and has one end connected to the bottom of a short upright member 30 that is connected by its top to one end of a lateral stabilising member 32 that is connected by its other end to the adjacent upright 16,18.

It will be noted therefore that, apart from central member 27, all the base frame's members extend in planes parallel to or transverse to the vertical plane of the main frame 12, i.e. they are not coplanar therewith, and thus provide a stable base for the upper frame 12.

All the members 16-32 are formed of aluminium tubing, the members' adjacent ends being interconnected by plastic joints such as 35 which are inserted into the hollow ends of the tubes before being gently hammered home in the arrowed direction (see Fig 3).

The ends of nylon or wire strands, or the sides of plastics material netting, are tied to the members 16-22 to form a mesh 36 across the upright frame 12.

In use, a grow bag 38 is lain on the base frame 14 to be supported thereby and such as to rest below the lower cross

member 22 of the upright frame 12 (which rises upwardly above it). The weight of the grow bag then holds the frame 10 in position and enables it to withstand wind forces. As the plants grow upwardly from the conventional longitudinal slit or cut in the grow bag's upper surface, they can be tied to the mesh 36 to be supported thereby. If the plants grow upwardly beyond upper cross member 20, the latter may be removed, extensions may then be provided to the upper ends of the upright members 16,18 before the cross member 20 is replaced on the upper ends of the extensions. Additional nylon or wire strands or, as is preferred, an extension net of plastics material may then be hung from the cross member 20 to depend therefrom and be joined to the pre-existing mesh 36.

It will be apparent that since the frame 10 is composed of a plurality of interconnecting parts, it can be sold in disassembled or knock-down form and so as subsequently to be assembled and erected with ease by the user.

It will be appreciated that the invention is not limited to the illustrated embodiment described above, and that one or more modifications can be made thereto without departing from the scope of the present invention.

CLAIMS

1. A support frame for plants to be grown from a grow bag, the support frame comprising base means, upright framing means, and a pair of spaced apart members extending downwardly to interconnect the framing means and the base means such as to provide a void between the said spaced apart members and between the base and the (remainder of the) framing means and such that a grow bag can be located in the said void below the upright framing means and be supported by the base means.

2. A support frame for plants to be grown from a grow bag, the support frame comprising upright framing means including a pair of spaced apart upright members, base framing means including one or more first members to support the lower end portions of said upright members and one or more second members extending in planes parallel to or transverse to the vertical plane of said upright members (i.e. not coplanar therewith) to support a grow bag below the upright framing means.

3. A support frame according to Claim 1 or Claim 2, wherein the frame is composed of a plurality of interconnecting parts.

4. A support frame according to any preceding Claim, wherein said framing means comprises a plurality of elongate tubular members interconnected by pre-formed joints.

5. A support frame according to Claim 4 wherein the said upright members and the said tubular members are aluminium tubes interconnected by joints of plastics material inserted into the hollow ends of the tubes.

6. A support frame according to any preceding Claim, wherein said framing means comprises a lattice-like array of spaced apart strands.

5 7. A support frame according to Claim 6, wherein said array is provided by a netting of plastics material.

8. A support frame according to Claim 6, wherein said array is provided by interwoven strands of wire or nylon.

10

9. A method of supporting plants growing from a grow bag, said method being characterised by laying the grow bag on a base portion of a support frame such that the grow bag is supported by said base portion, and upright portions of
15 the frame rise upwardly above it.

10. A method according to Claim 9 and substantially as herein described with reference to the accompanying drawings.

20 11. A support frame substantially as herein described with reference to and/or as illustrated in the accompanying drawings.